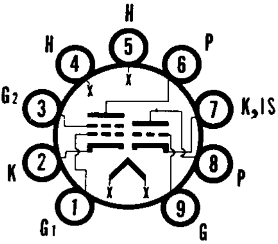


SYLVANIA TYPE 12DY8



9JD

MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9JD
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage[1]	12.6 Volts
Heater Current	350 Ma
Maximum Heater-Cathode Voltage	16 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Triode Section	Tetrode Section
Grid to Plate	1.5	0.74 μμf
Input	2.0	11 μμf
Output	2.0	3.0 μμf

MAXIMUM RATINGS (Design-Maximum Values)[2]

	Triode Section	Tetrode Section
Plate Voltage	16	16 Volts
Grid No. 2 Voltage	..	16 Volts
Grid No. 1 Resistance	10	10 Megohms

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Tetrode Section
Plate Voltage	12.6	12.6 Volts
Grid No. 2 Voltage		12.6 Volts
Grid No. 1 Voltage	0	(Note 3) Volts
Grid No. 1 Resistor		2.2 Megohms
Plate Current	1.2	14 Ma
Grid No. 2 Current		2 Ma
Transconductance	2000	6000 μmhos
Amplification Factor	20	
Plate Resistance (approx.)	10,000	5000 Ohms
Ec for Ib = 10 μAdc (approx.)	−2.0	Volts
Ec for Ib = 20 μAdc (approx.)		−9.0 Volts

TYPICAL OPERATION

Tetrode Section—Relay Service

Heater Voltage	10.0	15.0 Volts
Plate Supply Voltage	10.0	15.0 Volts
Grid No. 2 Voltage	10.0	15.0 Volts
Grid No. 1 Voltage	(Note 3)	−6.0 Volts
Grid No. 1 Resistor	10	0 Megohms
Plate Load Resistor	700	700 Ohms
Plate Current	5.0 Min.	3.0 Ma Max.

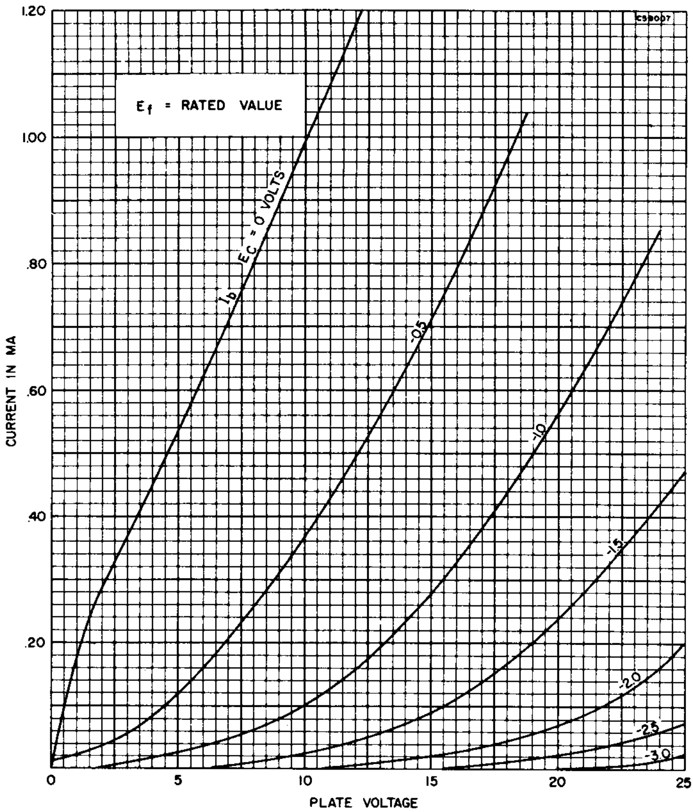
NOTES:

1. This tube is intended to be used in automotive service from a nominal 12 volt battery source. The heater is therefore designed to operate over the 10.0 to 15.9 voltage range encountered in this service. The maximum ratings of the tube provide for an adequate safety factor such that the tube will withstand the wide variation in supply voltages.
2. Design-Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.
   The device manufacturer chooses these values to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.
   The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.
3. Contact potential bias developed across specified grid resistor.

APPLICATION

The Sylvania Type 12DY8 is a double section tube featuring a tetrode which is designed and controlled for relay service in "signal-seeker" applications; and a general purpose sharp-cutoff triode.
The 12DY8 is intended for operation where the heater, plate and screen voltages are obtained directly from a 12-volt automotive electrical system.

AVERAGE PLATE CHARACTERISTICS
(Triode Section)



AVERAGE PLATE CHARACTERISTICS
(Tetrode Section)

